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LONG TERM VARIATION IN FIRST SECOND AND THIRD HARMONIC OF DAILY VARIATION IN COSMIC RAY INTENSITY AT WORLD WIDE NETWORK OF NEUTRON MONITORING STATIONS

ABSTRACT

THE PURPOSE OF PRESENT REASEARCH WORK DEALS WITH THE STUDY OF FIRST THREE HARMONICS OF COSMIC RAY INTENSITY ON GEOMAGNETICALLY QUIET DAYS FOR WORLD WIDE NETWORK OF NEUTRON MONITORING STATIONS. THE DIURNAL AMPLITUDE SIGNIFICANTLY DECREASE DURING THE PERIOD OFMINIMUM SOLAR ACTIVITY. THE PHASE OF FIRST HARMONICS SHIFT TO AN EARLIER TIME COMPARED TO THE COROTATIONAL / 1800 HOURS DIRECTION AT Deep River and Tokyo Neutron monitoring stations of different cutoff rigidity. THE PHASE OF FIRST HARMONICS SIGNIFICANTLY SHIFTED TO WARD LATER HOURS And for THE SECOND HARMONICS IT SHIFT TO WARD EARLIER HOURS AT LOW CUTOFF RIGIDITY STATIONS.i.e., DEEP RIVER AS COMPARED TO HIGH CUTOFF RIGIDITY STATION i.e., TOKYO STATIONS ON QUIET DAYS. THE AMPLITUDE OF THIRD HORMONICS IS RELATIVELY LARGER DURING THE DECLINING PHASE OF SOLAR CYCLE TWENTY one, THEREFOR THIS ENHANCEMENT ESTABLISH ELEVEN YEAR VARIATION IN THE AMPLITUDE OF THIRD HORMONICS OF COSMIC PAY INTENSITY ON QUIET DAYS AT EQUATORIAL NEUTRON MONITORING STATION as it is compared with earlier solar cycle TWENTY.

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